## **ABSTRACT OF THE DISCLOSURE**

The present invention extends to validating measurable aspects of computing system. A provider causes a challenge to be issued to the requester, the challenge requesting proof that the requester is appropriately configured to access the resource. The requester accesses information that indicates how the requester is to prove an appropriate configuration for accessing the resource. The requester formulates and sends proof that one or more measurable aspects of the requester's configuration are appropriate. The provider receives proof that one or more measurable aspects of the requester's configuration are appropriate and authorizes the requester to access the resource. Proof of one more measurable aspects of a requester can be used along with other types of authentication to authorize a requester to access a resource of a provider. Solutions to challenges can be precomputed and stored in a location accessible to a provider.

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